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# ECONOMIC ANALYSIS OF MOZAMBIQUE'S DRAFT LAW ON AGRICULTURE, FOOD SECURITY AND NUTRITION

DRAFT

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# Contents

<b>Executive Summary</b>	<b>iv</b>
<b>1. Introduction</b>	<b>1</b>
<b>2. Draft Law on Agriculture, Food Security and Nutrition</b>	<b>3</b>
Objectives	3
Nominated Policy Instruments	3
<b>3. Economic Commentary on the draft Law</b>	<b>5</b>
<b>4. Policy Options for Implementing the Draft Law</b>	<b>13</b>
<b>5. Conclusion</b>	<b>18</b>
<b>References</b>	<b>1</b>

## Illustrations

Figure 1. Real International Food and Fossil Fuel Price Indexes, 1960 to 2013	2
Figure 2. Indexes of aggregate crop production and real national income per capita, Mozambique, 1961 to 2012	10
Exhibit 4-1. Best-practice Regulatory Policy and Governance	17

# Executive Summary

Mozambique's new draft law aimed at boosting agricultural and rural development, food security and nutrition has laudable objectives, but the suggested means of achieving them are flawed.

The policy instruments nominated to boost farmer and processor output, productivity and welfare over the long term include investing more in farmer education, rural infrastructure and agricultural research. Provided additional public expenditures on those items are directed to the highest payoff areas, they will both raise the pace of economic growth and reduce poverty and thus food insecurity among farm households. In so far as those investments also lower the prices paid for food, they will reduce the food insecurity of poor non-farm households too.

However, the draft law also proposes raising barriers to agricultural imports so as to boost food self-sufficiency over the long term. Certainly import restrictions raise the welfare of net sellers of food – although the benefits are proportional to the farmer's marketable surplus, so this is a very blunt way to help the poorest farm households. Indeed this measure does nothing for those households that produce only enough food for their own needs. Moreover, it *lowers* the welfare and food security of net buyers of food whose purchase price is raised by the import barrier. The poorest and most food-insecure net buyers are hurt most, since they spend the highest proportion of their income on food. Import restrictions also work against the goal of providing a greater range of foods for consumers, since there is vastly more diversity in the international food marketplace than in a closed domestic market. Food import barriers therefore are likely also to worsen nutrition.

To deal with short-term fluctuations in prices and outputs of farm products, the main measures proposed in the draft law are rural credit and agricultural insurance subsidies, minimum producer price guarantees, government food reserves, and variable restrictions on food trade. These measures would increase government involvement in markets, contrary to one of the stated objectives of the draft law and reversing some of the growth-enhancing reforms of the past two decades.

History shows that heavy market interventions by governments tend to dampen investment incentives and thus output and income growth, thereby slowing poverty alleviation. Farm input subsidies and guaranteed minimum prices help the largest farmers most, so are very blunt ways to help the poorest farm households and do nothing for subsistence farmers not engaged in markets.

Government purchasing and storing of food in the hope of being able to sell it at a higher price in the future distorts the market price at both the buying and reselling times, and dampens the incentive for private agents to invest in storage. Past experience reveals that government agencies typically are much less able than private agents to pick the optimal times to buy and sell, so a more-efficient way to ensure the country has access to a sufficient stockpile of emergency reserves may be to subsidize private storage to the desired level, possibly in coordination with neighboring countries.

In times of price spikes or crop failures, income supplements targeted to the most vulnerable households, as part of a generic social protection program of conditional cash transfers, offer the most promising way to alleviate temporary losses and food insecurity. A pre-requisite for such a program to be cost-effective is a vibrant and highly competitive telecommunications market, so redirecting reform effort to that area may be worth considering in place of more-inefficient policy instruments nominated in the new draft law, most notably variable trade restrictions.

# 1. Introduction

The Government of Mozambique is keen to boost agricultural and rural development and at the same time strengthen national food and nutrition security. This is understandable for a country with 30% of GDP and more than two-thirds of jobs still coming from the agricultural sector, with 40% of the population undernourished, and with 60% of the population living on less than \$1.25 a day (World Bank 2014b).

Three recent global developments have made it challenging to achieve those policy objectives. One is the impact of rapid industrialization in China and other emerging economies in raising the trend level of real prices of food and other primary products in international markets: they have been rising during the past decade, in contrast to their downward trend over most of the 20<sup>th</sup> century. For Mozambique, the increase in primary product prices has brought a boom to some of its export industries within its primary sectors, while raising the prices of imports of some foods and fuel. Such changes in the terms of trade put an adjustment strain on parts of the economy and lead to food price inflation.

The second recent global development is a marked increase in the volatility of international food prices since 2007, during which time there have been three price spikes. The first, in 2008, was partly because global stocks of grain were exceptionally low at that time (Wright 2011). The insulating nature of the food trade policies of many countries—both exporters and importers—also contributed non-trivially to those price spikes (Martin and Anderson 2012).

The third recent development has compounded the first two. It is the much-expanded use of biofuel subsidies and mandates in the US, EU and elsewhere. Ostensibly those biofuel policies are aimed at enhancing energy security in those countries. However, they have raised both the mean and variance of international food prices and caused food and fossil fuel prices to move together since about 2005.<sup>1</sup> If recent political events continue to keep international fossil fuel prices high and volatile, biofuel subsidies and mandates will ensure they have a spillover effect on the height and instability of international food prices.

The consequences of these three developments for international prices are clearly reflected in Figure 1, namely, the recent reversal in the downward trend in international food prices,<sup>2</sup> their increased volatility, and their co-movement with fossil fuel prices since 2005.

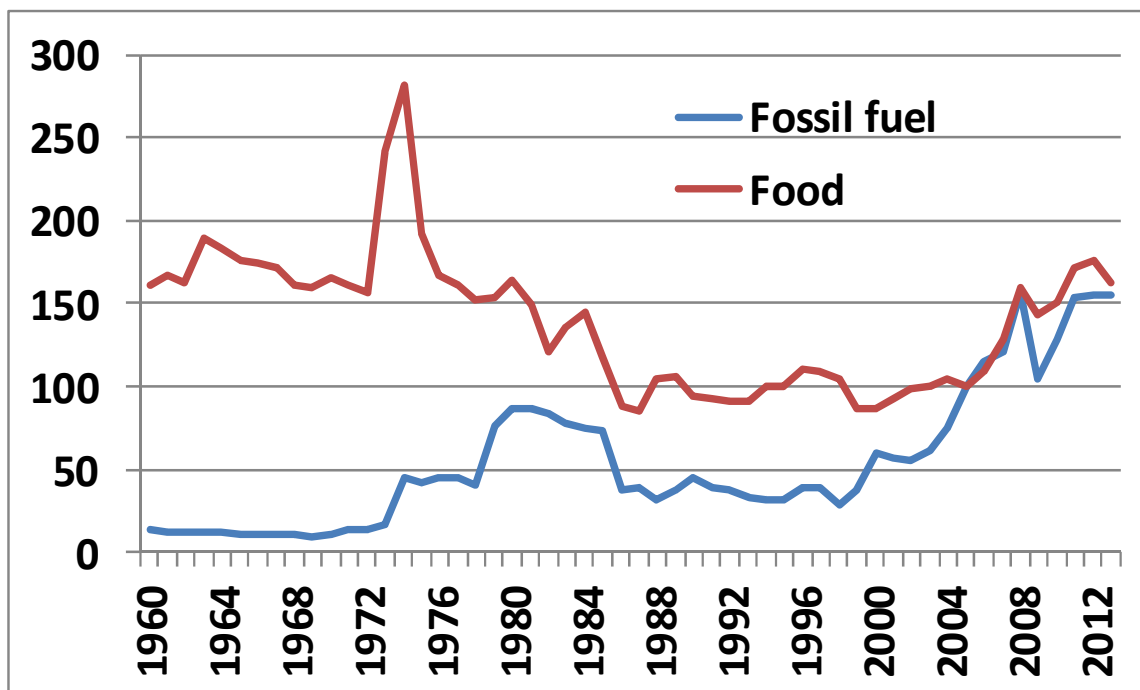
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<sup>1</sup>Timilsina et al. (2010) project that by 2020, international prices will be higher in the presence vs the absence of current biofuel subsidies and mandates as follows: for sugar (10%), corn (4%), oilseeds (3%), and (2%).

<sup>2</sup>The reversal in the trend in real prices of primary products relative to manufactures, as industrialization in China and other Asian countries booms, is not unlike what occurred with the original industrial revolution in the first half of the 19<sup>th</sup> century (Williamson 2012).

**Figure 1**

*Real International Food and Fossil Fuel Price Indexes, 1960 to 2013 (annual data, 2005 = 100)*



SOURCE: World Bank (2014a).

Consumers are upset by higher prices for food, and both they and domestic producers of marketable surpluses of food are concerned by the increased volatility of those prices.

It is in this setting that Mozambique has developed a draft law on agriculture and food security.

The purposes of this report are to assess the prospective impacts of this new draft law on Mozambique's food and agricultural markets and on the economic welfare of the main stakeholders, and to consider alternative or additional policy options which, if adopted, could reduce the cost of implementing the draft law and at the same time provide for more equitable, stable, and sustainable outcomes that lead to less poverty and more food and nutrition security in Mozambique.

The report is structured as follows. Section 2 outlines key elements of the draft law, summarizing both its stated objectives and the policy instruments nominated for addressing them. Section 3 offers an economic commentary on the nominated policy measures. Section 4 then assesses some alternative policy options that could be considered before implementing the draft law, so as to avoid or reduce the most adverse of the potential economic impacts of the various policy instruments mentioned in the draft law. The final section concludes by drawing out the main implications of the analysis for Mozambique's policy makers to consider.



## 2. Draft Law on Agriculture, Food Security and Nutrition

The new preliminary draft Law on Agriculture, Food Security and Nutrition has a mixture of objectives, related to concerns about both long-run market developments and short-term fluctuations in domestic markets for food staples and other farm products. It also specifies the various policy instruments that could be used to achieve those objectives. In this section these are summarized in turn, before providing an economic assessment of them.

### **OBJECTIVES**

The overall aims of the draft law are two-fold: to boost agricultural and rural development, and to enhance the nation's food and nutrition security in the sense defined at the World Food Summit of 1996. That is, its vision is to ensure that all citizens always have a sufficient quantity and quality of food that is safe, diverse, nutritious and affordable so as to enable them to live healthy, active and productive lives, and in the process to provide a firmer foundation for economic development of the agricultural sector and rural areas (where 70% of Mozambique's people work and live).

More specifically, the aims of the draft law (Articles 3-6 and 70) are to

- Modernize agriculture and increase farm production and food self-sufficiency while sustainably managing natural resources and the rural environment;
- Improve the productivity and welfare of farmers and processors and their competitiveness in both domestic and foreign markets;
- Improve consumer access to food at affordable prices, especially for the most vulnerable;
- Provide a diversity of food that fulfills consumers' safety, quality and nutritional requirements, and increase consumer knowledge and awareness of those benefits;
- Reduce interference in the private sector's marketing of storable commodities; and
- Encourage the private sector to invest more in agriculture and food processing.

### **NOMINATED POLICY INSTRUMENTS**

The nominated policy instruments for achieving the draft law's objectives are numerous and in some cases inconsistent. To boost agricultural production and food self-sufficiency over the long term, the main measures specified include

- Strengthening training of farmers and other rural workers and encouraging young people to contribute to agricultural and rural development (Articles 9, 11 and 19);

- Investing more public funds in rural infrastructure (Articles 14,18 and 42-49);
- Improving the management, development, and allocation by government of farm land (Article 17);
- Promoting agricultural R&D and extension of new technologies and access to seeds and other farm inputs (Articles 22, 25, 27 and 28);
- Improving the management of river basins, irrigation and drainage (Articles 31 and 32);
- Promoting animal and plant health (Articles 36-38);
- Ensuring adequate collection and dissemination of agricultural information (Article 41);
- Restricting agricultural imports (Article 56);
- Discouraging production of exportables if at the expense of domestic food production, and possibly encouraging domestic processing rather than exports of primary farm products (Articles 5e and 34);
- Establishing a National Council for Rural Development, Food Security and Nutrition to coordinate all the government initiatives aimed at achieving the objectives of the draft law and a Fund to finance them (Articles 62-66); and
- Ensuring sufficient rural credit and agricultural insurance (Articles 67-69 and 75-79).

To deal with short-term fluctuations in domestic prices of farm products and their availability, the main measures specified include

- Encouraging the setting aside of food reserves, and maintaining government stocks of basic commodities while not interfering with the free private market (Articles 26 and 53);
- Guaranteeing minimum prices for basic foods through acquiring and publicly storing agricultural products and managing their distribution (Articles 53 and 54);
- Varying restrictions on food imports (Article 56);and
- Ensuring sufficient agricultural insurance (Articles 75-79).

To provide a greater diversity of food that fulfills consumers' safety, quality and nutritional requirements, the main measure specified is

- Broadening and deepening consumer knowledge and awareness of the benefits of consuming foods that are safe and nutritious (Article 55).

## 3. ECONOMIC COMMENTARY ON THE DRAFT LAW

At the outset it should be recognized that several of the specific instruments nominated for achieving the objectives of this new law work against each other. The most obvious conflict is between the goal of improving consumer access to food at affordable prices and restricting imports of food, since that policy measure raises food prices. There is also a conflict between guaranteeing minimum prices for basic foods through acquiring and publicly storing agricultural products and managing their distribution on the one hand, and on the other the objective of reducing government interference in free private marketing. As well, no indication is provided of society's willingness to pay for the achievement of these various and conflicting objectives. Nor is there a ranking of priorities among them.

This section offers an economic assessment of the draft law's vision and then of its key proposals. The first three proposals, insofar as they led to enhanced investments and improved property rights, are likely to boost economic growth, agricultural output, rural development, food security and nutrition. The likely impacts of the subsequent proposals are far less positive, however. Indeed, since they involve increased market intervention and more government bureaucracy, they may well slow economic growth and thereby add to poverty and possibly even worsen national food security.

### **Vision**

The aspirational vision behind the draft law is laudable. However, promoting agricultural growth and rural development, while also ensuring that every citizen always has access to a healthy and nutritious diet of their choosing, would be prohibitively expensive for the government of any low-income country. A key challenge, therefore, is to decide how much society is willing to pay to work toward that vision and then to find the most efficient ways of achieving that overall goal so as to get as close to it as possible within society's cost constraint.

The overall goal of food security is more likely to be achieved the higher and more equitably distributed is national income, and in particular the lower is the incidence of poverty. Any initiative that promotes pro-poor economic growth in the country – and especially in its rural areas – is therefore likely to contribute toward achieving the draft law's goals. Conversely, initiatives that inhibit rural and overall economic growth are likely to undermine that effort.

### **Rural Education and Infrastructure Investments**

A positive contribution to income growth and equality can almost certainly be expected from investing more public funds in basic education in rural areas (of girls at least as much as boys), and in

rural infrastructure such as roads and telecommunications (Fan 2008; Mogues et al. 2012). This is increasingly the case as urbanization proceeds and, for equity reasons, if income growth in cities outstrips that in rural area: the more education today's rural children receive, the more productive they will be regardless of whether they stay in agriculture or choose a non-farm career. Better-educated citizens are more likely to stay above the poverty line and thus be able to afford a nutritious diet. They will also be better able to take advantage of digital goods and services such as mobile telephony and the internet as and when they can access them.

The lower is the private cost to domestic farmers of learning about and supplying urban food markets, the less likely those markets will be supplied from abroad. Better rural roads and telecoms also make it less costly for members of farm households to earn extra income from part-time off-farm jobs, and more profitable for non-farm businesses to locate and provide jobs in provincial towns that are accessible to farm families. If those non-farm activities improve the efficiency of the country's food value chains, that further contributes to the domestic marketable surplus and net incomes of farm households and thus to national food security.

Modern information and communication technologies, particularly mobile phones and the internet, are rapidly lowering the cost to both buyers and sellers of obtaining price and other market information from any region in the country, or indeed abroad. These modern technologies are thus making it more difficult for excessive profit-making by any seller or buyer to persist, even in small remote regions. An effective way of further promoting market transparency and reducing excess profit-making is thus to ensure that those technologies are made as widely available as possible and at the lowest cost to both agribusinesses and farm households. The more widely available are mobile telecom services, the more feasible it will also be for the government to use modern social protection instruments such as conditional cash transfers to needy households.

According to international experience, strong competition or at least contestability in the domestic market for telecom services is essential for continuing innovation in that market. A recent study of Korea and Uganda found that mobile banking services appear at different stages of financial sector development, depending on how vibrant and competitive is the telecommunications sector (Gutierrez and Choi 2014). It found the regulatory environment does not need to be very sophisticated for the mobile industry to emerge, but the legal framework should allow (or at least not explicitly forbid) nonbank financial institutions to use banking agents. That study also concluded that it is important to educate the population on the benefits of mobile money services to ensure its widespread use,

## **Improved Property Rights and Markets for Land and Water**

Improvements by the government in issuing and policing property rights to farm land and water resources, and in developing the institutions and policies to foster well-functioning markets for the transferring of land and water rights, could add substantially to farmer incentives to expand farm production. They would also enhance farmers' prospects of securing rural credit. That would increase both the social payoff from investments in dams, drainage, etc. and the likelihood of private sector involvement or public-private investment partnerships. . However, such developments seem unlikely in the foreseeable future because, according to the country's Constitution, land and water belong to the State.

## **Agricultural R&D Investments**

Investing more public funds in the highest-payoff areas of agricultural R&D also is certain to make a positive contribution to economic growth. This is because there is a high marginal social rate of return from further spending in this area in most developing countries (Rao, Hurley and Pardey 2012). Moreover, it is likely to have an especially high payoff in Mozambique where, as a percentage of agricultural GDP (0.4%), its level of investment in 2008 was less than half the global average and even one-fifth below the Sub-Saharan African average (ASTI 2014).

How much impact agricultural R&D investments and extension efforts have in reducing poverty and food insecurity depends on which farm industries and which types of producers are targeted. Improved seeds or technologies for the food staples of the poorest households would directly reduce inequality and poverty as well as food insecurity. This is especially so for the foods that are not traded internationally, because their expanded supply lowers their price and thus also benefits net buyers of those foods. New technologies for producers of cash crops also can be helpful in boosting food security, even if those crops are produced only by larger farmers. For example, such technologies could raise the demand for farm labor, or for workers further along the value chain such as in processing, which could raise the incomes of poor households. So the main criterion for selecting research projects should be the social rate of return from an expansion in public R&D investment, regardless of which crops might benefit.

The R&D need not be undertaken only by government research providers of course. Universities, for example, may be able to undertake some research projects cheaper, so they could be subsidized by the government if there would otherwise be less investment in this area than is socially optimal.

## **Animal and Plant Health Promotion**

Healthy plants and animals contribute to national food security and food safety. Maintaining their health, like that of humans, is not costless though. As with all other areas of government activity, care needs to be taken to ensure the most-efficient policy instruments are used to maintain healthy plants and animals – and that those instruments are not used excessively, otherwise food consumers may pay unnecessarily high prices for their food (Anderson, McRae and Wilson 2012).

## **Import Restrictions to Alter the Trend Level of Prices**

Much more questionable are the nominated uses in the draft law for trade policy measures such as import restrictions, not least because – unlike new technologies that R&D can provide – they have opposite effects for producers and consumers. Certainly a restriction on imports raises the producer price of a domestic substitute for that importable good, which boosts the welfare of net sellers of that product. However, it does nothing for those households that produce only enough of that product for their own needs; and it lowers the welfare of net buyers of that good whose purchase price is raised by the import barrier. The reduced consumption by net buyers contributes to the goal of national self-sufficiency, but at the cost of reducing that group's food security. And it is the poorest and most food-insecure net buyers who are hurt most, since they spend the highest proportion of their income on food. Certainly net sellers will be encouraged by the higher price to expand their domestic production, but it is the largest producers who would benefit most – and they are the ones least likely to be food-insecure.

Import restrictions can also work against the goal of providing a greater diversity of foods for consumers: there is vastly more diversity in international food markets than in any nation's domestic food market, including Mozambique's. Hence keeping food trade barriers down offers the greatest

prospect for consumers to diversify their diet at the lowest cost. It also offers the greatest prospect for food and feed processors to satisfy domestic demands.

The most efficient and most growth-enhancing outcomes for an economy come from unfettered market activity, and especially free trade across national borders. However, such openness is even more likely to boost economic growth and hence food security if foreign firms are able to set up businesses alongside local firms, including in processing, importing, distribution, storage, wholesaling and retailing along the value chain. Import restrictions reduce those opportunities.

If import barriers were to be so high as to generate food self-sufficiency, one consequence may be greater instability of the domestic food market. This is because variable seasonal conditions cause production fluctuations that are likely to be larger than those in the rest of the world as a whole (where good seasons in some regions are more or less balanced out by poor seasons in other regions of the world). Empirical evidence supports this hypothesis: domestic prices of non-traded foods in Sub-Saharan Africa have fluctuated more than those of traded foods (Minot 2014).

### **Export Discouragement to Boost Local Food Output & Processing**

Article 5e seems to suggest production of exportables is to be discouraged if it would be at the expense of domestic food production, and Article 34 hints that domestic processing of primary farm products is to be encouraged rather than allow them to be exported in unprocessed form. This may add to domestic consumption of some foods, but at the expense of export earnings. Whether it creates additional jobs and value added in the processing sector depends on how close those processors are to being internationally competitive. If they are not very close, processing may still not be privately profitable. In that case such measures would lead to the country producing less GDP and earning less foreign exchange through not exploiting fully its comparative advantage.

### **Rural Credit and Agricultural Insurance Provision**

Because farming is weather-dependent and thus inherently a risky activity, farmers need credit from time to time to ease cash shortages. Obtaining credit at affordable rates is made easier the more collateral available. Hence the importance of ensuring property rights to the use of assets such as land and water are as secure as possible, even if ownership of those assets remains in the hands of the State. It does not follow that rural credit should be subsidized or provided cheaply through government-owned banks, however. On the contrary, since such subsidies have to be rationed, it is typically the most-wealthy who benefit most because lending large amounts to a small number of them has lower transactions costs and less risk than lending similar aggregate amount to lots of small borrowers who tend to have less collateral (Buttari 1995).

Seasonal variations also make agricultural insurance attractive to farmers but expensive to provide. Numerous developing countries have publicly provided crop insurance against low crop yields that are tied to credit from publicly run agricultural development banks. Those experiences led to disappointing outcomes though, for a variety of reasons outlined by Hazell (2013). Crop insurance is susceptible to moral hazard because attempts are rarely made to limit the kinds of losses covered or to identify the cause of losses. Adverse selection arises because premium rates are set at regional or national levels while payments are based on individual losses. Incentive problems arise within insurance institutions when the government underwrites their programs, and these institutions are also undermined by government regulations for low premium rates and direct assistance programs in disaster areas. As a result of these difficulties, public crop insurance programs were largely phased out

in the 1990s. If they are to be reconsidered, partnerships with the private sector might need to be explored to reduce the likelihood of major losses.

## **Variations in Import Restrictions to Reduce Market Instability**

Varying the barriers to trade at the country's border can reduce fluctuations in domestic food markets in principle at least. In practice, the timing of such variations is crucial, and it is quite possible for ministers and their bureaucrats to add to rather than reduce such instability by acting too late. That has happened with maize in several African countries, most notably in Kenya, Malawi, Zambia and Zimbabwe which have large state-owned trading enterprises that buy and sell maize and other staples (Minot 2011).

If quantitative restrictions (i.e. quotas) rather than taxes are used to restrict trade, that also opens up scope for corruption, especially if those quotas are not openly auctioned. Having to apply for quotas adds to the cost of doing business, and delays can mean processors and final consumers face unpredictable shortages from time to time. The uncertainty associated with the administration of import quotas also adds to foreign traders' costs of supplying the market in a timely fashion. Moreover, such insulating interventions encourage other (including neighboring) countries to follow suit. This then exacerbates the spike in the international price, making it tougher for non-intervening countries and reducing the effectiveness in each insulating country of its own actions.

## **Minimum Prices and Reserves for Basic Food**

As a hangover from colonial days and prior to its economic reforms that began in the late 1980s, Mozambique had fixed prices for farm products and required all sales to pass through AGRICOM, a parastatal marketing board. Minimum prices were still present for some products in the 1990s, although they were only indicative after 1996 (Alfieri, Arndt and Cirera 2009). They were abandoned in part because they proved to be a very inefficient and inequitable way to provide social protection. The inefficiency arises because they encourage excessive production when prices would be low, and they are inequitable because they support incomes of producers in proportion to their marketed surplus and so help the largest producers most. Should Mozambique return to a system of minimum prices, those inefficient and inequitable outcomes will emerge again. Today there are potentially far more efficient and equitable ways to provide social protection to the most-needy households in times of low producer prices, as discussed in the next section.

Holding a public reserve of staple foods may serve a social purpose if it calms the domestic market and is used effectively for emergency relief at times of crisis. However, private storers have more incentive than salaried bureaucrats to raise (lower) stocks when prices fall (rise), so it may be more efficient to not crowd private actors out of the market by setting up a public stockpile. Should the aggregate stockholding by the private sector be deemed insufficient from society's perspective, it is likely to be cheaper to subsidize those storers' activities rather than set up a public storage operation. (Such operations tend to crowd out private storage in part because they can be subject to political imperatives that over-ride their commercial decisions – see Gulati, Rashid, and Cummings 2008).

Even just the possibility of the government becoming more involved in storage of various products, as provided in the draft law, dampens incentives for firms to invest in storage facilities. With less such investments, there is less scope for private agents to contribute to price stability. If national public storage is to be undertaken, the review by Wright (2012) suggests it should be limited to a stockpile that is appropriate to meet prospective emergency food security needs rather than aimed at modifying the behavior of prices. Even then there is scope to form an agreement with neighboring countries or

other trading partners to be able to draw on their emergency stocks if need be, in which case each agreeing country's optimal emergency stockpile will be smaller the smaller the correlation between national shortfalls in production due to adverse seasonal conditions.

## **A New Council, Secretariat and Fund**

The draft law envisages the establishment of a National Council for Rural Development, Food Security and Nutrition to oversee the coordination of all the government initiatives aimed at achieving the objectives of the draft law. The Council is to be serviced by a Secretariat, and a Fund is to be established to finance both of them. The expected budget for this is not specified, but numerous activities envisaged for this Council and Secretariat are listed. Among other things they include the requirement that any proposed policies, programs or investments that may impinge on food security and nutrition will have to be subjected to an ex ante impact assessment.

In so far as impact assessments turned out to be an onerous burden on prospective investors, they would discourage investment and thus lower the rate of national economic growth. Such a requirement may also be in conflict with agreements already in force between the Government and, for example, mining firms whose ventures are about to get under way. Mozambique is already very low down the ranking of countries in terms of ease of doing business (139<sup>th</sup> out of 189 countries – World Bank 2013), so anything that adds to the burden of operating in the country risks sending that ranking lower, discouraging further investment.

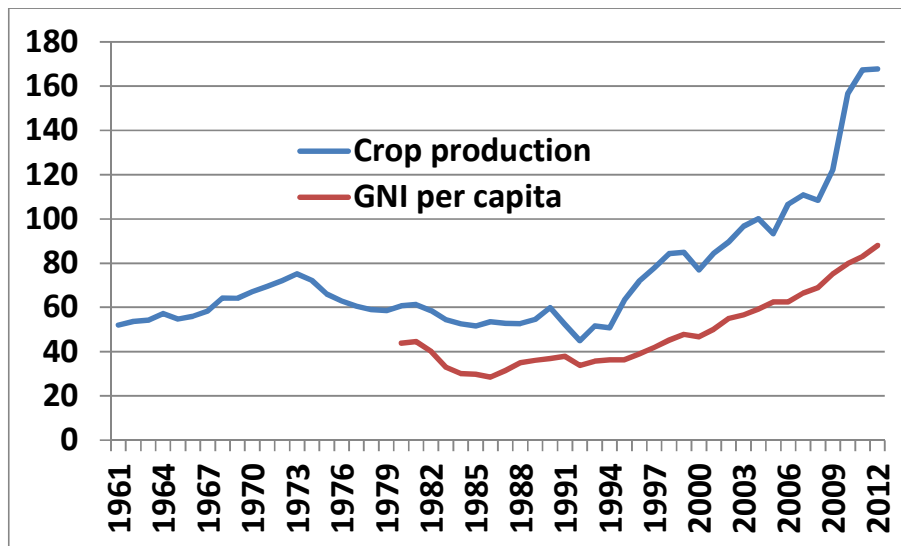
## **Greater Market Intervention**

Implementing all the provisions in the draft law would in aggregate mean considerable intervention in markets for farm inputs and outputs, including storage and distribution, notwithstanding statements of principle to the contrary such as in Article 5j (“reduced interference in the free private marketing”). In Mozambique and many other countries, history has shown that heavy market intervention dampens investment incentives and thus output and income growth, thereby slowing poverty alleviation. Throughout the long period of administered prices to the early 1990s, including prior to the 1980s' civil war, Mozambique's crop production stagnated; but, once markets were liberalized, production and incomes began to grow rapidly, and they have continued to do so for the past two decades (Figure 2). Care is therefore needed when considering new interventions, so as to ensure they generate net benefits for society after appropriately taking into account any investment-reducing impact they may have.



**Figure 2**

*Indexes of aggregate crop production and real national income per capita, Mozambique, 1961 to 2012 (2004-2006 = 100 for crop production and 61.5 for income)*



Source: World Bank (2014b)



## 4. Policy Options for Implementing the Draft Law

According to the UN's Food and Agriculture Organization, enhancing food security and nutrition means ensuring more availability, better economic access, and better utilization of food from a nutritional viewpoint (Pinstrup-Andersen 2009, Barrett 2010). Subsistence farm households by definition avail themselves of food via self-production. For many people even in low-income countries, however, food is most cheaply available in markets. How much access households have to available food supplies depends heavily on their income or assets or other entitlements (e.g. transfers such as remittances). And how well they utilize the food that is accessible to them depends on their knowledge and willingness to ensure a healthy and nutritious diet for all household members. The latter in turn depends on the level of education in the household, particularly of female adults, which again is closely correlated with household income and wealth or other entitlements. Thus food insecurity is a consumption issue that is closely related to poverty and the price of food.

From this perspective, any initiative that raises the real incomes of the poor without raising the price of food could enhance both food security and economic growth, while any policy action that distorts the domestic price of a food could affect poverty and food insecurity either positively or negatively and is likely to reduce overall economic growth. We therefore examine these two sets of initiatives sequentially.

### **Food Security Initiatives that Enhance Economic Growth**

Initiatives in the new draft law to boost food security and nutrition that fall into the first category of being growth-enhancing potentially include investments in rural education, rural infrastructure and agricultural R&D, and improvements in land and water property rights and markets, discussed in the first half of the previous section. To ensure that their potential to boost food and nutritional security is realized requires undertaking *ex ante* due diligence just as for any other major investment.

Coincidentally, such investments are also likely to boost aggregate food production more than they boost food consumption, given that people spend only a fraction of any income increase on food, and assuming the prices of at least the foods that are internationally tradable doesn't change. In that case they would also boost the country's food self-sufficiency.

Such growth-enhancing measures also would facilitate Mozambique's adjustment to some other global developments not mentioned above. These are forces that often fall under the general heading of globalization, because they are driven by declines in the transactions costs of doing business across space (both within and between countries). They are also associated with rapidly rising incomes in and urbanization of emerging economies, which are driving major changes in diets. The supermarket revolution is contributing to those transformations, but there is as well a 'quiet revolution' taking

place within many countries that is rapidly altering also the supply chain for staple foods destined to less-sophisticated markets—again driven by declines in transactions costs and changes in demand patterns in towns and cities (Reardon et al. 2012). These market forces are in turn transforming farm production systems and food trade in developing countries. In particular, farming is becoming more of a part-time activity for many households, so that their economic well-being depends increasingly on earnings from post-farmgate processing and service activities in addition to those from farm production itself (Otsuka and Yamano 2006; Reardon and Timmer 2014).

Indeed this is part of a broader revolution in global value chains that is impacting on manufacturing and services trade too. As Baldwin and Lopez-Gonzales (2013) make clear, this dramatically changing feature of global commerce is expanding business opportunities for those countries that have not only open borders but also flexible domestic markets not hampered by high costs of regulatory compliance. The regulatory elements of the new draft law need to be evaluated in this light, because there are many articles in that draft law that suggest the government may intervene more in markets and become a more-active player along the value chain of farm products.

## Price-distorting Proposals

Actions proposed in the new draft law that fall into the category of intervening in ways that will alter domestic prices of farm products require a more critical appraisal, because such distortionary actions generally reduce national welfare. As well, their distributional effects and hence impacts on poverty and food insecurity are uncertain without empirical analysis of each specific proposal.

Many governments have comprehensively reviewed their various price-distorting and other market-regulating policies over recent years. Most have sought to increase competition in their economies, recognizing that increased competition can improve a country's economic performance, open more business opportunities to its citizens thanks to the global value chain revolution, and thereby boost economic growth and reduce the cost of goods and services throughout the economy. Plurilateral organizations such as the OECD and APEC have pooled their knowledge and understanding to suggest guidelines for national governments seeking to reform their regulatory practices (OECD 2005a,b). The recent global financial crisis has prompted them to emphasize this even more, leading to the release of a very comprehensive competition policy toolkit (OECD 2011) and a revised set of recommendations on regulatory policy and governance (OECD 2012a). Those best-practice recommendations are summarized in Exhibit 4-1. While it appears that few of those were taken on board during the drafting of Mozambique's new draft law, there is nonetheless the opportunity during the re-drafting phase to adopt more of those best practices. In particular, using benefit/cost analysis to evaluate the worth of proposed key regulatory changes before deciding whether they should be adopted might help to avoid the most costly of interventions.

Some of the price-distorting measures discussed in Section 3 above are directed at altering the trend level of domestic prices, so as to boost food self-sufficiency; others are directed at reducing the instability of prices around their trend level, so as to avoid catastrophic losses for certain groups were food prices to spike up or down or were crops to fail because of adverse weather or natural disasters.

The key measure that would alter trend levels of prices is a restriction on food imports. It necessarily raises food self-sufficiency and benefits net sellers of that food – but at the expense of both net buyers of that food, who would face a higher price, and producers in other industries who compete for land and other resources used to produce that good. If among the poor in Mozambique there are more net

buyers than net sellers of that food, poverty and food insecurity would probably increase if such an import restriction was imposed.

Import restrictions are also proposed in cases where a farm product's international price slumps, to reduce the fall in farm incomes. Minimum prices may be offered to farmers at such times, with the government purchasing and storing the product (presumably in the hope of being able to sell it at a sufficiently higher price in the future to cover the cost of handling, storage, interest and spoilage). This action would distort the market price at both the buying and reselling times, and in addition it would dampen the incentive for private agents to invest in storage.

The other key proposal in the draft law for safeguarding farm incomes, at times of crop failure, are subsidies to credit and crop insurance. These measures would distort the markets for banking and insurance services, and thus slow their natural development, and those able to provide other possible private risk management instruments (Byerlee, Jayne and Myers 2006). They beg the question as to what is the market failure that these interventions are aimed at offsetting.

## **Alternatives to Price-distorting Policies**

In abnormal times involving a food price spike or farm price slump, it is not unreasonable that governments may wish to provide social protection to some vulnerable households. What alternative instruments might governments use instead of varying their trade restrictions to avert losses for significant groups in their societies? Food security for consumers, most notably food affordability for the poor, may be dealt with most efficiently using generic social safety net measures that offset the adverse impacts of a wide range of different shocks on poor people—net sellers as well as net buyers of food—without imposing the costly by-product distortions that necessarily accompany the use of *n*<sup>th</sup>-best trade policy instruments for social protection. Such measures might take the form of targeted income supplements to only the most vulnerable households, and only while the price spike lasts.

This standard answer has far greater power now than just a few years ago, thanks to the digital information and communication technology (ICT) revolution. In the past it has often been claimed that such payments are unaffordable in poor countries because of the fiscal outlay involved and the high cost of administering such handouts. However, the ICT revolution has made it possible in numerous developing countries for conditional cash transfers to be provided electronically as direct assistance to even remote and small households, and even to the most vulnerable members of those households (typically women and their young children – see, e.g., Fiszbein and Schady (2009), Adato and Bassett (2012) and Skoufias, Tiwari and Zaman (2010)). Such transfers can even boost economic growth (Alderman, and Yemtsov 2013; Gertler, Martinez and Rubio-Codina 2012).

Indonesia, for example, has been a leader in trialing both conditional and temporary unconditional cash transfers. Transfers have been aimed at providing direct cash benefits conditional on household participation in locally-provided health and education services. They have had an immediate impact in reducing household vulnerability while encouraging investment in long-term household productivity. They thereby have the potential to break the intergenerational cycle of poverty. More specifically, Indonesia's conditional cash transfers have directly increased income for very poor households and at the same time promoted healthy behaviors: expenditure on health services saw especially large increases, and assisted households also increased their share of food expenditure on protein-rich foods (World Bank 2012a). Those programs have been supplemented by temporary unconditional cash transfers to raise food consumption by poor households facing unprecedented price increases.

Moderately-sized benefits have been delivered at the right time, for the right duration, throughout Indonesia, and with a very lean administrative apparatus (World Bank 2012b).

These programs demonstrate that developing countries can reduce both chronic long-term food insecurity associated with intergenerational poverty cycles and short-term food insecurity associated with food price spikes. As experience with these new social protection mechanisms grows, they promise to provide perhaps the most cost-effective ways of dealing with food security concerns. They therefore are worth considering as prospective alternatives to the more-inefficient policy instruments nominated in Mozambique's new draft law, most notably variable border trade-restricting measures. A pre-condition for their adoption, though, is a vibrant and competitive telecommunications sector.

**Exhibit 4-1***Best-practice Regulatory Policy and Governance*

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The OECD and APEC have pooled their knowledge and understanding to suggest guidelines for national governments seeking to reform their regulatory practices (OECD 2005a,b). The recent global financial crisis has prompted them to emphasize this even more, leading to the release of a comprehensive competition policy toolkit (OECD 2011) and a revised set of recommendations on regulatory policy and governance (OECD 2012a), drawn in part on regulatory reform in Australia (Office of Best Practice Regulation 2010). Those best-practice recommendations include the following (*italics added for emphasis*):

- Commit at the highest political level to an explicit *whole-of-government policy* for regulatory quality. The policy should have *clear objectives and frameworks* for implementation to ensure that, if regulation is used, the economic, social and environmental benefits justify the costs, the distributional effects are considered, and the net benefits are maximized.
  - Adhere to principles of *open government, including transparency* and participation in the regulatory process to ensure that regulation serves the public interest and is informed by the legitimate needs of those interested in and affected by regulation. This includes providing meaningful opportunities (including online) for the public to contribute to the process of preparing draft regulatory proposals and to the quality of the supporting analysis. Governments should ensure that *regulations are comprehensible and clear* and that parties can easily understand their rights and obligations.
  - Establish mechanisms and institutions to actively provide oversight of regulatory policy procedures and goals and thereby *foster regulatory quality*.
  - Integrate Regulatory Impact Assessment (RIA) into the early stages of the policy process for the formulation of new regulatory proposals. Clearly *identify policy goals, and evaluate if regulation is necessary* and how it can be most effective and efficient in achieving those goals. Consider means other than regulation and identify the tradeoffs of the different approaches analyzed to identify the best approach.
  - Conduct systematic program reviews of the stock of significant regulation against clearly defined policy goals, including *consideration of costs and benefits*, to ensure that regulations remain up to date, cost justified, cost effective and consistent, and deliver the intended policy objectives
  - Regularly *publish reports on the performance of regulatory policy* and reform programs and the public authorities applying the regulations. Such reports should also include information on how regulatory tools such as Regulatory Impact Assessment (RIA), public consultation practices and reviews of existing regulations are functioning in practice.
  - Develop a consistent policy covering the role and functions of regulatory agencies in order to provide greater confidence that *regulatory decisions are made on an objective, impartial and consistent basis*, without conflict of interest, bias or improper influence.
  - Ensure the effectiveness of systems for the review of the legality and procedural fairness of regulations and of decisions made by bodies empowered to issue regulatory sanctions. Ensure that citizens and businesses have access to these systems of review at reasonable cost and receive decisions in a timely manner.
  - Apply risk assessment, risk management, and risk communication strategies to the design and implementation of regulations to ensure that regulation is targeted and effective. Regulators should assess how regulations will be given effect and should *design responsive implementation and enforcement strategies*.
  - Where appropriate *promote regulatory coherence* through co-ordination mechanisms between the supranational, the national and sub-national levels of government. Identify cross-cutting regulatory issues at all levels of government, to promote coherence between regulatory approaches and avoid duplication or conflict of regulations.
  - Foster the development of regulatory management capacity and performance at sub-national levels of government.
  - In developing regulatory measures, *give consideration to all relevant international standards and frameworks* for co-operation in the same field and, where appropriate, their likely effects on parties outside the jurisdiction.
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## 5. Conclusion

The world economy is altering very rapidly, and Asia is fast becoming a major center of gravity for world production, consumption and trade, including for food. The opportunities to become more engaged in that process are enormous, including through joining the world's global value chains. Mozambique could become an integral contributor to and beneficiary of these dramatic developments. It can do so more, the sounder its macroeconomic policies, the more open and flexible its economy, the more clearly it defines and enforces property rights, and the more coherent and transparent are its regulatory processes and governance. By these standards, however, the new draft law appears to be moving Mozambique's food system away from rather than towards these emerging opportunities, and could make it less rather than more likely that its various industries add to national economic growth, poverty alleviation and food security.

Overall government assistance to Mozambique's agricultural sector switched from being negative up to the end of the 20<sup>th</sup> century to being close to neutral in the first few years of this century (Alfieri, Arndt and Cirera 2009). If implementation of the new draft law were to include restricting food imports more in the years ahead, and if international prices were to not rise much above current levels, then assistance to the sector could rise. Self-sufficiency in the targeted products would be higher, but food security (in terms of the quantity and quality of food consumption by households) would be less, as would growth-enhancing trade with China and other Asian countries.

The challenge of switching from trade to domestic policy instruments for addressing domestic concerns such as rural-urban income inequality and food price fluctuations is evidently non-trivial for low-income countries. Yet social protection mechanisms involving conditional and unconditional cash transfers should be explored by the government, as they have the potential to offer more efficient, equitable, and sustainable ways to deal with unforeseeable household losses and associated food insecurity. If supplemented with an expansion of public investments in agricultural R&D and rural education and infrastructure, they would also add to Mozambique's overall economic growth rate.



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